

What is claimed is:

1. A method for dynamically allocating tasks in a computer system,
comprising:
assigning a maximum computer resource load to each of a plurality of computer
platforms, wherein a first of said computer platforms has a first maximum computer
5 platform load and a second of said computer platforms has a second maximum resource
load;
assigning a computer resource requirement to a task;
assigning said task to a selected one of said plurality of computer platforms; and
performing said task in connection with said selected computer platform.
2. The method of Claim 1, wherein said first computer platform load is not
equal said second computer resource load.
3. The method of Claim 1, wherein said step of assigning a computer
resource requirement comprises assigning a point value to said task.
4. The method of Claim 1, further comprising providing a computer
resources table, wherein indications of maximum computer resource loads for each of
said plurality of computer platforms is maintained in said table.

5. The method of Claim 4, wherein each of said plurality of computer resources reports a maximum computer resource load amount to said table prior to said step of assigning a task.

6. The method of Claim 1, wherein a task is not assigned to a computer platform if doing so would cause said indication of a computer resource load amount of said computer platform to exceed a maximum computer resource load associated with said computer platform.

7. The method of Claim 1, wherein said first computer platform is assigned said task, wherein a maximum computer resource amount associated with said computer platform is exceeded, and wherein said first computer resource rejects said assigned task.

8. The method of Claim 7, wherein said task is assigned to said second computer platform after said rejection of said task by said first computer platform.

9. The method of Claim 1, further comprising classifying said task by type.

10. The method of Claim 9, further comprising providing a computer resources table, wherein an indication of a computing resource load and of a task capability for each of said plurality of computer platforms is maintained in said table.

11. The method of Claim 10, wherein said task is assigned to a computer platform listed in said computer resources table according to said computing load and said task capability.

12. The method of Claim 1, wherein said computer platforms comprise at least one of a processor, an input/output port, an area of memory, and an allocation of bandwidth.

13. The method of Claim 1, further comprising:

sensing a temperature of a carrier associated with at least one of said computer platforms;

altering a clock rate of a computer resource associated with a computer platform

5 included in said carrier;

altering a maximum load value of said computer platform, wherein a maximum load value of said computer platform is increased if said clock rate is increased, and wherein a maximum load value of said computer platform is decreased if said clock rate is decreased.

14. The method of Claim 1, further comprising:

altering at least one of said plurality of computer platforms, wherein said step of altering comprises at least one of adding, removing, and modifying said at least one computer resource associated with said computer platform.

15. A method for dynamically allocating computer processor tasks,
comprising:
dynamically specifying a first capability of a first computer processor;
receiving a first task requiring processing, wherein a first processor load value is
5 associated with said first task;
assigning said first task to said first computer processor; and
processing said first task using said first computer processor.

16. The method of Claim 15, further comprising:
dynamically specifying a first capability of a second computer processor;
receiving a second task requiring processing, wherein a second processor load
value is associated with said second task;
5 assigning said first task to a second computer processor, wherein said second
processor load value of said second task plus a current load value of said first computer
processor is greater than said dynamically specified capability of said first computer
processor.

17. The method of Claim 15, further comprising:
a computer processor capability table, wherein a dynamically adjusted first
capability value for said first computer processor is stored.

18. The method of Claim 16, wherein a second capability parameter associated with said first computer processor is stored in said computer processor capability table.

19. The method of Claim 15, further comprising specifying a task capability associated with said first computer processor and with a second computer processor, wherein a task of a first task type is assigned to a computer processor having a task capability including said first task type, and wherein a task of a first type is not assigned
5 to a computer resource having a task capability that does not include a task of said first type.

20. The method of Claim 15, further comprising:
altering a performance characteristic of said first processor, wherein said step of dynamically specifying comprises respecifying a first capability of said first processor.

21. The method of Claim 20, wherein said altered performance characteristic comprises at least one of a frequency of operation, an operating voltage, and a rate of instructions.

22. A computer resource allocation system, comprising:
at least a first computer platform comprising at least a first computer resource,
wherein said at least a first computer platform has a task type capability and a resource
amount capability;

5 processing software running on a server processor, comprising:

a software task allocation unit, wherein a task is completed in connection
with a computer platform having a task type capability required to complete said task and
a resource amount capability sufficient to complete said task.

23. The system of Claim 22, wherein said software task allocation unit further
comprises:

a software table, wherein an entry for said at least a first computer
platform is maintained in said table, and wherein for each such entry a task type
5 capability and a task resource amount are specified.

24. The system of Claim 22, wherein said task resource amount is dynamically
altered in response to a change in a resource amount capability of said at least a first
computer platform.

25. The system of Claim 24, wherein said change in a resource amount
capability is in response to a substitution of said at least a first computer resource with a
second computer resource.

26. The system of Claim 24, wherein said change in a resource amount capability is in response to a modification of an operating parameter of said at least a first computer resource.

27. The system of Claim 26, wherein said modification of an operating parameter of said at least a first computer resource comprises a modification of at least one of a frequency of operation, an operating voltage, and a rate of instructions.

28. The system of Claim 24, further comprising a temperature sensor, wherein said change in a resource amount capability of said at least a first computer resource is made in response to a change in temperature sensed by said temperature sensor.

29. The system of Claim 22, wherein said at least a first computer resource comprises at least one of a computer processor, an input/output port, an area of memory, and an allocation of bandwidth.